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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/530,167	09/13/2005	Elger Funda	4662-524	5611
23117 7590 09/15/2010 NIXON & VANDERHYE, PC 901 NORTH GLEBE ROAD, 11TH FLOOR ARLINGTON, VA 22203				
EXAMINER				
HOBBS, LISA JOE				
ART UNIT		PAPER NUMBER		
1657				
MAIL DATE		DELIVERY MODE		
09/15/2010		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/530,167

**Applicant(s)**

FUNDA ET AL.

**Examiner**

Lisa J. Hobbs

**Art Unit**

1657

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 June 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 23-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 23-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/C)
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date: \_\_\_\_\_

## **DETAILED ACTION**

### ***Claim Status***

Claims 23-32 are active in the case. Claims 1-22 have been cancelled by amendment. Claims 23-32 are under examination; no claims are withdrawn as drawn to a non-elected invention.

### ***Claim Rejections - 35 USC § 112***

The rejection of claim 22, with dependent claims 23-31, is withdrawn in view of the cancellation of the independent claim. The rejection is not maintained for the new independent claim since the claim clearly sets forth the conditions that applicant considers "modified".

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 23-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wasche et al. (US 7300681 B2), Msika et al. (7029713 B2), Perrier et al. (US 5912016 A), and Buttner et al. (WO 99/51106 A1).

Wasche et al. teach that "the comminuted and facultatively deoiled lupine seeds are extracted in an acid water extraction at pH values between 3 and 6, with no chemical reactions occurring between the solvent water and the dissolved lupine seed fractions. Various separation processes can be used for the actual separation between the solid parts, the so-called raffinate I and the liquid part, the extract I, such as for example using a decanter, separator or a filter. Also suited for separation is a continuously operating drum centrifuge. The raffinate I obtained in this separation is then extracted using alkalinized water at pH values of 7 to 10 and divided following renewed solid-liquid separation into an extract II and a raffinate II. In this case too, separation occurs using the state of the art separation process. The liquid extract II obtained in the second separation step is acidified to a pH value between 3 and 5.5 by adding an acid in doses due to which the predominant part of the proteins in the liquid extract II is precipitated. Acidification

yields as the precipitant a precipitated protein in the form of a protein curd and excess liquid”

[Detailed Description para 4].

Msika et al. teach “A process for preparing such a peptide extract of lupin comprises the following steps: preparing a lipid-free, ground lupin meal or a micronized lupin flour (containing lipid), extracting the soluble protein and saccharide fractions or precipitating with acid pH (4 or 5) depending on the isoelectric point, optionally separating the protein fraction, hydrolyzing the protein fraction and recovering, optionally after filtration, the protein extract” [Brief Summary para 19].

Perrier et al. teach obtaining a lupin protein by a process comprising using 0.75 g of lupin flour (ultrafine flour of sweet white lupin (CANA) containing 45% of proteins) is dispersed in 15 ml of acetate buffer of pH 7.4. The dispersion is agitated magnetically for 10 min and then centrifuged and the supernatant is separated off” and dispersed into various organic solvents, resulting in a solid sediment (Example 1). They also teach the use of the lupin protein in a composition comprising “various substances in suspension, for example pigments, in solution, for example a sugar such as glucose, or in emulsion, for example an oil, particularly a paraffin oil” and they find that it is “possible to encapsulate substances, particularly active principles, including lipophilic active principles such as vegetable, mineral or synthetic oil, vitamin A and vitamin E derivatives, etc., and hydrophilic active principles such as plant extracts, ascorbic acid, vitamin C PMG, glucose, organic pigments and inorganic pigments. It should be noted that within the description and the claims, “vitamin C PMG” signifies vitamin C magnesium phosphate” (col.8).

Buttimer et al. teach the “production of high-oil binding lupin protein composition by holding an aqueous slurry of lupin protein composition at an alkaline pH at elevated temperature and optionally neutralizing the slurry to give a restructured lupin protein composition.” The specific steps are that lupin meal was steamed for 5 minutes at 95 °C and tested to confirm that endogenous lipase activity had been eradicated. Blanched meal was dispersed to 17% solid in water and adjusted to pH 4.5 using hydrochloric acid. Dispersion was passed through centrifugal separator to remove oligosaccharides. Resulting slurry was made to 14% solids, adjusted to pH 8.5 by addition of sodium hydroxide and passed through scraped-surface heat exchanger to raise temperature to 90°C. Slurry was then neutralized by addition of hydrochloric acid, then spray-dried.

They teach that the composition is “used to produce high-oil binding lupin protein compositions and high-oil, lupin-based emulsions, which may be used in functional food ingredients such as foodstuffs, drinks (energy or sports drinks) or animal feeds. The foodstuff include baby foods, bakery products (breads, yeast goods, cakes), bakery supply products (custards, bakery fillings or toppings), batters or breadings, cereals, confectionaries, flavor or beverage emulsions, fruit fillings, gravies, soups, sauces, food thickeners, frozen, chilled or ambient stable and pasteurized, retorted or ultra-high temperature (UHT)-treated gravies, soups, sauces, food thickeners, meal or meal components (vegetarian meal components), meat products (comminuted meat products, sausages, burgers, grill steaks, canned meats, meat pies, fish, meat spreads or pastes), pet foods, pharmaceuticals, nutraceuticals (health foods), potato products, dairy products (ice creams, desserts, milk drinks, milkshakes, yogurts, cheeses, cheese spreads or dips), dressings (salad or low-fat dressings), snacks, crackers, spreads (savory or sweet spreads),

pasta products (noodles), fat-filled powders (non-dairy creamers), quiches, flans, textured vegetable proteins (textured vegetable products), vegetarian grill steaks, pates (vegetarian pates or spreads), vegetable or meat extracts, low-fat cheeses, spreads or mimetics, animal or fish feeds (baits and lures). The composition is also used for cosmetics e.g. face creams, lipsticks, deodorant carriers, lotions, hair gels, soaps (liquid soaps) or skin-care products (sun lotions). It is also useful in crop protection compositions, agrochemicals, pesticides, oil-reclamation compositions, molds, castings, paints, inks, lubricants, encapsulation systems and moisture barriers (all claimed). Used to increase oil-binding functionality of lupin protein compositions. Used to produce caseinate mimetics" [Derwent summaries].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Wasche et al., Msika et al., Perrier et al., and Buttimer et al. in order to obtain the invention as recited in the instant claims. The art teaches lupin proteins which are obtained by a process of adjusting protein suspensions to a dry mass content as desired and then separating the protein from other substituents via centrifugation or filtration, among other treatments, and then using the resulting protein in many compositions with many other substituents, as taught by Buttimer et al., as a food additive. One would be motivated to do this because it "provides alternative, inexpensive, broadly acceptable and effective functional protein isolates and concentrates, which provide high degree of oil-binding capability while having high levels of fiber. [It p]roduces lupin protein, which has stabilizing activity equal to, or greater than, that of caseinate. May be extracted by standard protein extraction techniques e.g. those used in soya bean processing" [Derwent summary].

***Response to Arguments***

Applicant's arguments filed 30 June 2010 have been fully considered but they are not persuasive. Applicant argues that the modification procedure set forth in the new independent claim, claim 32, is not made obvious by the prior art of record. However, the ranges recited as limitations in the new claim are very large, such as a lupin content of 0.1 to 20%, a pH of 3 to 9, adding 0.1 to 10% protease incubating at a temperature of from 5 to 70 °C and a final degree of hydrolysis of 1 to 30% and the prior art of record includes specific citations which fall within these limitations. The prior art recites pH values of extraction from 3-6, 7-10, 3-5.5, 4 or 5, and 7.4, all of which have values within the recited limits. The prior art recites various amounts of lupin proteins to start the extraction. The prior art teaches the use of proteases for hydrolysis, and one of skill in the art would know how to modify amounts of protease to obtain maximal activity. Applicant argues that a specific amount of hydrolysis is key to the interpretation of the claims, but the limitation presented is from 1% to 30% hydrolysis, especially the lower end of which limitation appears obtainable by one of skill in this art using the techniques provided in the prior art of record.

Particularly, the art of record in the application comprises McNeil (WO 02/19836 A2) who recites a process of obtaining hydrolyzed protein materials, particularly soy bean or wheat or corn gluten, but which process can be applied to any protein material, as discussed in the description, the obtaining of 25% to 29% hydrolysis using enzymatic digestion at a pH of about 7 to 7.5 and a temperature of 50 to 55 °C.



***Conclusion***

No claims are allowed.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lisa J. Hobbs whose telephone number is 571-272-3373. The examiner can normally be reached on Monday to Friday, 8:00 a.m. to 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jon P. Weber can be reached on 571-272-0925. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Lisa J. Hobbs/  
Primary Examiner  
Art Unit 1657

ljh